

AMENDMENTS TO THE CLAIMS

1-8. (Canceled)

9. (New) A compound sheath superconducting wire comprising:

a plurality of magnesium boride core wire members;

a metal cladding layer, wherein the metal cladding layer has an electric resistance of $7\ \mu\Omega$ or less at room temperature;

a metal base member having a plurality of tubular openings in a longitudinal direction, wherein the metal base member has a Vickers hardness of at least 50 at room temperature, and wherein the plurality of magnesium boride core wire members are inserted into the plurality of tubular openings; and

an intermediate layer, wherein the intermediate layer is a junction auxiliary material arranged between the metal cladding layer and the metal base member.

10. (New) A compound sheath superconducting wire comprising:

a plurality of magnesium boride core wire members;

a metal cladding layer, wherein the metal cladding layer has a Vickers hardness of at least 50 at room temperature;

a metal base member having a plurality of tubular openings in a longitudinal direction, wherein the metal base member has an electric resistance of $7\ \mu\Omega$ or less at room temperature and the plurality of magnesium boride core wire members are inserted into the plurality of tubular openings; and

an intermediate layer, wherein the intermediate layer is a junction auxiliary material arranged between the metal cladding layer and the metal base member.

11. (New) The compound sheath superconducting wire of claim 9, wherein the plurality of magnesium boride core wire members are twisted.

12. (New) The compound sheath superconducting wire of claim 9, wherein the plurality of magnesium boride core wire members have a density of at least 90% with respect to a theoretical density.

13. (New) The compound sheath superconducting wire of claim 9, wherein the junction auxiliary material comprises at least one material selected from the group comprising copper, silver, gold, palladium, aluminum, silicon, indium, tin, zinc, iron, lead, nickel, manganese and boron.

14. (New) The compound sheath superconducting wire of claim 9, wherein the metal cladding layer comprises at least one material selected from the group comprising copper, aluminum, gold, silver, nickel, molybdenum, brass and niobium.

15. (New) The compound sheath superconducting wire of claim 9, wherein the metal base layer comprises at least one material selected from the group comprising SUS304, SUS316, SUS310, SUS430, carbon steel, cobalt, tungsten, nickel, molybdenum, titanium, aluminum-based alloy, titanium-based alloy, nickel-based alloy, copper-based alloy, niobium-based alloy and magnesium based alloy.

16. (New) The compound sheath superconducting wire of claim 10, wherein the plurality of magnesium boride core wire members are twisted.

17. (New) The compound sheath superconducting wire of claim 10, wherein the plurality of magnesium boride core wire members have a density of at least 90% with respect to a theoretical density.

18. (New) The compound sheath superconducting wire of claim 10, wherein the junction auxiliary material comprises at least one material selected from the group comprising copper, silver, gold, palladium, aluminum, silicon, indium, tin, zinc, iron, lead, nickel, manganese and boron.

19. (New) The compound sheath superconducting wire of claim 10, wherein the metal cladding layer comprises at least one material selected from the group comprising copper, aluminum, gold, silver, nickel, molybdenum, brass and niobium.

20. (New) The compound sheath superconducting wire of claim 10, wherein the metal base layer comprises at least one material selected from the group comprising SUS304, SUS316, SUS310, SUS430, carbon steel, cobalt, tungsten, nickel, molybdenum, titanium,

aluminum-based alloy, titanium-based alloy, nickel-based alloy, copper-based alloy,
niobium-based alloy and magnesium based alloy.